

## MEMORANDUM

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**To:** Tierra del Sol Solar Farm LLC; Rugged Solar LLC  
**From:** Jennifer Longabaugh; Dudek  
David Deckman, Senior Air Quality Specialist; Dudek  
**Subject:** Response to Selected Comments (Greenhouse Gas Emissions and Carbon Sequestration): Mark Ostrander, January 20, 2015  
**Date:** February 2, 2015  
**Attachment:** Attachment A, Resume

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On January 20, 2015, Mark Ostrander submitted comments to the San Diego County Planning Commission on the Final Programmatic Environmental Impact Report for Soitec Solar Development Project, SCH No. 2012-121-018.

With respect to greenhouse gas emissions and carbon sequestration, Mr. Ostrander provides the following comment on Page 2:

*Greenhouse Gas Emissions:*

*Construction phase will contribute to short term contribution of greenhouse gases from equipment working on the project. Long-term contribution is likely from loss of vegetation which is valuable in carbon sequestration during its lifecycle. The previous ECO project under estimating the water usage and the increased truck trips hauling water was not addressed in the original EIR and there were no consequences for the increased greenhouse gasses. This could potentially be the same with this project as the same company that did the study for ECO is the same for this project. The cumulative impacts need to be studied for this area.*

Response:

The statement regarding construction GHG emissions is noted.

As analyzed in Section 3.1.3, Greenhouse Gases, the Proposed Project has been reviewed by the California Air Resources Board and certified by Governor Jerry Brown as an Environmental Leadership Project under the Jobs and Economic Improvement through Environmental Leadership Act (AB 900) (Public Resources Code (PRC) Section 21178 et seq.) which, as a

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prerequisite, requires that the project not result in any net additional GHG emissions pursuant to PRC Section 21183(c). To ensure the Proposed Project would result in a zero net increase in GHG emissions, the project applicant has committed to obtain voluntary carbon offsets or GHG credits from a qualified GHG emission broker to offset total projected construction and operational GHG emissions as stated in the *AB 900 Application for the Soitec Solar Energy Project*. These carbon offsets would likely come from a carbon mitigation registry, where the offsets are frequently generated from “sustainable forests” in California and other locations. Because densely forested areas have a much greater carbon sequestration capacity than sparse, low-lying desert species, a positive benefit should occur as a result of the AB 900 certification. Carbon sequestration value in sparse, low-lying desert vegetation communities is much lower compared to more robust vegetative communities, and the mechanism by which carbon dioxide is taken up by desert soils and associated flora is not fully understood. Specifically, it is not understood whether temporary disruption of desert soils during construction of a project would release carbon dioxide or eliminate or reduce the potential carbon sequestration capacity of desert soils, and if it did occur, the mechanism by which it would occur (i.e., inorganic or biological uptake).

Section 3.1.3 also analyzes the potential long-term GHG emission offset of fossil-fuel-generated electricity resulting from operation of the Proposed Project. In keeping with the renewable energy target under the Climate Change Scoping Plan adopted by the California Air Resources Board in 2008 and updated in 2014 and as required by SB X1 2, the Proposed Project would provide a source of renewable energy to achieve the state-mandated Renewable Portfolio Standard of 33% by 2020.

Moreover, the desert vegetation communities of San Diego have burned routinely over many years. While the vegetation communities in the Proposed Project area have not burned in several decades, that does not mean that it is not likely to burn at some time in the future. When it does, the sequestered carbon in the biomass will be released as carbon dioxide (CO<sub>2</sub>), which is a GHG. Thus, even if the Proposed Project were not implemented, there would still be a likely release of CO<sub>2</sub> to the atmosphere at some time in the future. Eventually, the burned areas will recover and recovering vegetation will again sequester carbon. Thus, the carbon cycle in the on-site vegetation communities is a complex issue, which may be beyond the scope of a CEQA analysis. Nonetheless, the project would provide the voluntary carbon offsets or GHG credits for the program eligibility, and there would not be a net increase in GHG emissions following implementation of the Proposed Project.

Furthermore, there is no universally accepted methodology for evaluating carbon sequestration potential of desert soils and flora in CEQA documents (as contrasted with forests, the loss of

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which is identified as a potentially significant impact in Appendix G of the CEQA Guidelines). No significance thresholds or other criteria have been established for evaluating loss of carbon sequestration resulting from removal of vegetation on a proposed project site.

Regarding truck hauling trips, the FPEIR accurately accounted for all imported water to the Proposed Project sites based on anticipated construction water demand. See Appendix 9.0-5 for details regarding water demand, haul trips and resulting air quality emissions associated with the Tierra del Sol solar farm, Rugged solar farm, and the Proposed Project.

**CERTIFICATION**

This memorandum has been prepared by Mr. David Deckman. Mr. Deckman is a County of San Diego-approved CEQA Consultant for Air Quality.



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David Deckman  
Senior Air Quality Specialist

**ATTACHMENT A**  
*Resume*

# David Deckman

## Air Quality Services Manager

David Deckman is Dudek's air quality services manager with over 38 years' environmental compliance and analysis experience, including 31 years as an air quality specialist, specializing in California Environmental Quality Act/National Environmental Policy Act (CEQA/NEPA) air quality assessments, permitting and regulatory compliance support, emission inventories, and health risk assessments.

### EDUCATION

University of California, Davis  
MS, Ecology, 1973

University of California, Los Angeles  
BS, Engineering, 1971

### PROFESSIONAL AFFILIATIONS

Air and Waste Management Association

Mr. Deckman has managed and prepared air quality assessments for a wide variety of development projects throughout California, including large residential and commercial projects, colleges and universities, renewable energy, hospitals, industrial and mining projects, infrastructure projects, and distribution centers and trucking projects. Many of these projects have involved specialized analyses, including health risk assessments, ambient air quality impact analysis, and greenhouse gas (GHG) inventories.

Mr. Deckman's experience also includes air quality permitting and compliance support for a diverse range of manufacturing, food processing, power generation, and other industrial facilities. This parallel experience enhances his understanding of air quality regulatory matters for projects subject to CEQA and NEPA.

## RELEVANT PROJECT EXPERIENCE

### Development

**Emission Inventory for the Idaho-Maryland Mining Corporation, City of Grass Valley, California.** Managed and prepared revisions to an emission inventory for a proposed gold mine and tile manufacturing facility in Grass Valley. The initial emission inventory was prepared to support the draft environmental impact report (EIR) for the proposed project, and the revised inventory will support a recirculated EIR. Revisions included improved emission factors and estimates for mobile equipment, trucks and employee vehicles, and tile kilns and dryers. New emission estimates included several hazardous air pollutants associated with natural gas combustion and additional indirect sources (electricity and water supply) of GHGs. Audited the Microsoft Excel workbooks used to calculate the project emissions. Provided recommendations for improving the assessment and potentially reducing emissions to less-than-significant levels.

**Air Quality Assessment for the Gless Ranch Shopping Center, City of Riverside, California.** Managed preparation of and contributed to an air quality assessment for a proposed shopping center in Riverside. The project included approximately 420,000 square feet of retail and commercial space with three major stores and several small stores. Managed dispersion modeling

analysis to demonstrate whether construction of the project would comply with the South Coast Air Quality Management District's (AQMD's) localized significance thresholds (LSTs). The air quality assessment included an analysis of the project's GHG emissions and the impact on climate change, along with a review of project features and possible mitigation measures to reduce those emissions.

**Air Quality Assessment for Wal-Mart Regional Distribution Center, Wal-Mart Stores Inc., Barstow, California.** Managed preparation of an air quality assessment for the proposed Wal-Mart regional distribution center in Barstow, California. Assessment included air emissions associated with project construction and with employee vehicles, supplier trucks, and distribution trucks in the Mojave Desert Air Basin and other air basins through which trucks would pass while traveling from supplier facilities and to stores. A health risk assessment of diesel particulate matter emissions associated with on-site truck activity was also conducted.

**Air Quality Assessment for Five Bridges Specific Plan, Lennar, Banning, California.** Managed the air quality assessment for a proposed master-planned community and grade separation. The master-planned, mixed-use community includes the development of up to 2,214 residential units, 51.6 acres of commercial retail space, a fire station, and 106.2 acres of parks and open space on 548.4 acres of undeveloped land. In addition to the analysis of the project's construction and operational emissions, the air quality assessment included dispersion modeling analysis to demonstrate whether construction of the project would comply with the South Coast AQMD's LSTs.

**Air Quality Assessment for Flying J Travel Plaza, Flying J, Dixon, California.** Managed preparation of an air quality assessment for the Flying J Travel Plaza in Dixon, California. Assessment included emissions associated with project construction and with automobiles, trucks, and transport refrigeration units (TRUs). A health risk assessment of diesel particulate matter emitted from trucks, TRUs, and auxiliary power units was also conducted.

**Air Quality Assessment for Distribution Center, ProLogis, City of Rialto, California.** Prepared air quality assessment for ProLogis's large-scale warehouse and distribution facility in the City of Rialto. Emission sources included employee vehicles and a variety of medium-duty and heavy-duty trucks. Assessment included a health risk assessment of diesel vehicle emissions associated with operation of the project, an air quality impact analysis of criteria pollutant emissions from motor vehicles operating on the facility site, and a carbon monoxide (CO) hotspots analysis at roadway intersections.

**Health Risk Assessment for Wal-Mart Store, City of Fremont, California.** Prepared a health risk assessment of diesel vehicle emissions associated with operation of a Wal-Mart discount store in the City of Fremont as input for the project's EIR. Assessed impacts of criteria pollutant

emissions from construction equipment on ambient air quality during project construction. Responded to extensive public comments on the draft EIR.

**Health Risk Assessment for Freight Transfer Facility, Roadway Express, Bloomington, California.** Prepared a health risk assessment of diesel truck emissions associated with operation of a Roadway Express freight transfer facility in the County of San Bernardino as input for the project's EIR. Participated in public hearings before the County Planning Commission and Board of Supervisors.

**Air Quality Assessment for Intermodal Facility, Burlington Northern Santa Fe Railroad, San Joaquin County, California.** Managed preparation of an air quality assessment for relocation of Burlington Northern Santa Fe Railroad an intermodal (rail/truck) facility from the City of Stockton to rural San Joaquin County. Assessment included estimates of construction emissions from vehicles, equipment, and fugitive dust; estimates of criteria pollutants from trucks and on-site diesel support equipment, a health risk assessment of diesel emissions, and a CO hotspots analysis at roadway intersections.

**Air Quality Assessment for the Villages at San Jacinto Specific Plan, City of San Jacinto, California.** Managed preparation and contributed to an air quality assessment for a large specific plan in western Riverside County. The project included up to 1,329 residential units, a high school, 196,963 square feet of commercial and office space, and parks. Managed dispersion modeling analysis to demonstrate whether construction of the project would comply with the South Coast AQMD's LSTs. The air quality assessment included an analysis of the project's GHG emissions and the impact on climate change, along with a review of project features and possible mitigation measures to reduce those emissions.

**Air Quality Assessment for the Tehachapi Upland Multiple Species Habitat Conservation Plan, Tejon Ranch Corporation, Kern County, California.** Managed preparation of an air quality assessment for the environmental impact statement (EIS) for the Tehachapi Upland Multiple Species Habitat Conservation Plan. For the EIS, four alternatives were fully evaluated with the development scenarios, including up to 8,752 residential units and 6,762,690 square feet of commercial space in the San Joaquin Valley and the Eastern Kern Air Pollution Control Districts (APCDs) with buildout over 20 years. Both criteria pollutants and GHG emissions were estimated. Responded to comments from third-party reviewers and the general public during public review of the EIS.

**Travertine Point Specific Plan, Federated Insurance, Riverside and Imperial Counties, California.** Managed preparation and contributed to an air quality assessment for a large specific plan near the Salton Sea. The project included 12,300 residential units, 3.7 million square feet of commercial space, and related parks and schools. While the project was located primarily in Riverside County (in the South Coast AQMD), a portion was in Imperial County (in the Imperial County APCD). In addition, some of the property was located on tribal lands, with the balance

on private lands. This arrangement required that several analyses be prepared due to multiple jurisdictions. The air quality assessment included an analysis of the project's GHG emissions and the impact on climate change, along with a review of project features and possible mitigation measures to reduce those emissions.

**Air Quality Assessment for the Docks Area Specific Plan, City of Sacramento, California.** Managed preparation of an air quality assessment for the Docks Area project in Sacramento, California. The project consists of up to 1,155 residential units, 500,000 square feet of office space, and 43,300 square feet of retail space. Three alternative build-out scenarios were evaluated. Because of the proximity of residential units to two freeways, the assessment included a health risk analysis of the diesel emissions from motor vehicles in accordance with the Sacramento Metropolitan AQMD protocol.

**Air Quality Assessment for Development under the Newhall Ranch Specific Plan, Newhall Land, Los Angeles County, California.** Managed all technical work for an air quality assessment of the Newhall Ranch Resource Management and Development Plan and associated development under the Newhall Ranch Specific Plan in northern Los Angeles County. Managed dispersion modeling analysis to demonstrate whether construction of the project would comply with the South Coast AQMD's LSTs and whether diesel particulate matter from mobile equipment and trucks would cause unacceptable health impacts. Emission calculations used URBEMIS2007, EMFAC2007, and other methods to manually calculate emissions resulting from construction activities and from development under six potential alternatives to the proposed project.

**Air Quality Assessment for Mission Village, Newhall Land, Valencia, California.** Managed preparation of an air quality assessment for the Mission Village subdivision within the Newhall Ranch Specific Plan in northern Los Angeles County. Managed dispersion modeling analysis to demonstrate whether construction of the project would comply with the South Coast AQMD's LSTs and whether diesel particulate matter from mobile equipment and trucks would cause unacceptable health impacts. Emission calculations used URBEMIS2002, EMFAC2002, and other methods to manually calculate emissions resulting from construction activities and proposed project operation.

**Air Quality Assessment for Pelandale/McHenry Specific Plan, City of Modesto, California.** Managed preparation of an air quality assessment for a partially developed 82-acre site under the Pelandale/ McHenry Specific Plan in the City of Modesto, California. Assessment included estimates of construction and operational emissions associated with 210 single-family homes and 146 apartments, as well as an existing mobile home park on the project site.

**Air Quality Assessment for Sun City Tehama Specific Plan, Del Webb, Tehama County, California.** Managed preparation of an air quality assessment for the Sun City active adult community in northern Tehama County. The project included 3,700 single-family residential units, commercial

and retail uses, a golf course, and a wastewater treatment plant. Prepared responses to air quality comments on the draft EIR.

**Air Quality Assessment for Residential Development, City of Mountain View, Mountain View/Palo Alto, California.** Managed preparation of an air quality assessment for the 100 Mayfield residential developments in Mountain View and Palo Alto. The residential units would replace an existing office complex.

**Air Quality Assessment for Neptune Marina Apartments and Woodfin Suites Hotel and Timeshare Resort, Legacy Partners/Woodfin Suites Hotel, Marina del Rey, California.** Managed preparation of an air quality assessment for the proposed 526-unit, multifamily Neptune Marina Apartments and Woodfin Suites Hotel and Timeshare Resort in Marina del Rey. The assessment included estimates of construction emissions, including demolition of existing buildings, motor vehicle emissions, and area source emissions. The assessment also included a dispersion modeling analysis of the ambient air quality impacts during construction to satisfy the South Coast AQMD's LST procedures.

**Air Quality Assessment for the Shores, County of Los Angeles, Marina del Rey, California.** Managed preparation of an air quality assessment for the Shores, a 544-unit, multifamily residential complex in Marina del Rey. The assessment included estimates of construction emissions, including demolition of existing buildings, motor vehicle emissions, and area source emissions. The assessment also included a dispersion modeling analysis of the ambient air quality impacts during construction to satisfy the South Coast LST procedures.

**Health Risk Assessment for Runkle Canyon Development, City of Simi Valley, California.** Prepared a health risk assessment of diesel equipment emissions associated with construction of the Runkle Canyon multiphase residential development in Ventura County in response to EIR comments from the Ventura County APCD.

**Air Quality Assessment for Quarry, Aggregate Plant, and Asphalt Plant, Vulcan Materials Company, Madera County, California.** Managed and prepared key section of an air quality assessment for a proposed hard rock quarry, aggregate plant, and asphalt plant. The project would involve annual production of approximately 2.5 million tons of aggregate and 500,000 tons of asphalt. Tasks included estimates of criteria air pollutants, toxic air contaminants, and GHGs from diesel off-road equipment, motor vehicles, and aggregate and asphalt processing equipment. It included a health risk and odor assessment and air quality impact analysis. The air quality impact analysis evaluated impacts on criteria air pollutant levels in the vicinity of the project using AERMOD. The health impacts were evaluated using a combination of AERMOD and HARP. The risk assessment and air quality impact analysis were prepared for the applicant to submit to the Madera County planning department for use in an EIR for the proposed project.

**Air Emissions Estimate for Asphalt Plant, Vulcan Materials Company, Roseville, California.** Managed preparation of air emissions calculations for modification of an asphalt and concrete recycling plant located in Roseville. The plant is adding equipment for recycling asphalt pavement on a 3.4-acre site adjacent to the plant's present processing equipment for crushing and screening both recycled concrete and asphalt. The calculations were prepared in accordance with the Placer County APCD recommendations and guidelines for CEQA documents.

**Health Risk Assessment and Air Quality Impact Analysis for Expansion of Quarry, Triangle Rock Products, Sacramento County, California.** Managed a health risk assessment and air quality impact analysis for expansion of the Triangle Rock Products aggregate quarry in Sacramento County. Prepared risk assessment and impact analysis for the applicant to submit to the County of Sacramento for use in an EIR for the proposed project. Tasks included estimates of toxic air contaminants emissions from diesel off-road equipment and criteria pollutant emissions. Health impacts of diesel exhaust particulate matter and PM<sub>10</sub> and nitrogen dioxide (NO<sub>2</sub>) impacts were evaluated using AERMOD.

**Health Risk Assessment, Odor Assessment, and Air Quality Impact Analysis for Expansion of Quarry and Proposed Concrete and Asphalt Plant, Northern Aggregates, Mendocino County, California.** Managed and prepared portions of a health risk assessment, odor assessment, and air quality impact analysis for expansion of the Northern Aggregates quarry and a proposed concrete and asphalt plant in Mendocino County. The risk and odor assessments and impact analysis were provided by the applicant to the County of Mendocino planning department for use in an EIR for the proposed project. Tasks included estimates of toxic air contaminant and criteria pollutant emissions. Health impacts were evaluated using the Hotspots Analysis and Reporting Program and the ambient air quality impacts were evaluated using ISCST3.

**Air Quality Assessment and Health Risk Assessment, Bloomfield and Silver Oak Dairies, Kern County, California.** Managed preparation of air quality studies for two proposed dairies in Kern County. Studies included emission calculations of volatile organic compounds, ammonia, and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), odor assessment of ammonia emissions, health risk assessment of ammonia and diesel exhaust particulate matter, and ambient air quality impact analysis of PM<sub>10</sub> and PM<sub>2.5</sub> in the vicinity of the proposed dairies.

**Health Risk Assessment for Operation of Cement Import and Distribution Facility, A&A Ready Mixed Concrete, Sacramento, California.** Managed preparation of a health risk assessment of diesel equipment and truck emissions associated with operation of the A&A Ready Mixed Concrete cement import and distribution facility at the Port of Sacramento, which was prepared in response to comments on the project's EIR. Assessment included an existing and proposed operating scenario. Net health impacts associated with the modification of the existing facility were quantified and reported.

**Health Risk Assessment for Operation of Materials Recovery Facility and Transfer Station, Athens Services, Los Angeles County, California.** Prepared a health risk assessment of diesel equipment and truck emissions associated with operation of the Athens Services materials recovery facility and transfer station in response to EIR comments from the South Coast AQMD. Assessment included several different operating scenarios and alternatives. Negotiated operating conditions associated with diesel trucks and a phase-in of alternative-fueled trucks that were acceptable to both the applicant and the County of Los Angeles.

**Air Quality Assessment and Supplemental EIR, Shasta County AQMD, Shasta Lake, California.** Managed preparation of supplemental EIR and prepared air quality assessment for modification of the existing Knauf Fiber Glass manufacturing plant in the City of Shasta Lake. Modifications included an increase in nitrogen oxides emissions and a reduction in PM<sub>10</sub> emissions. Activities included independent review of analyses by applicant's consultant and summaries of relevant data and findings.

**Air Quality Assessment for Co-Composting Facility, Westlake Farms, Kings County, California.** Managed preparation of an air quality assessment of the Westlake Farms co-composting facility (municipal waste biosolids, municipal green waste, and agricultural waste). Operational emission sources included aerated static piles for composting, on-site heavy diesel equipment, employee vehicles, and transport trucks. Emission reductions from diverting agricultural waste currently being open-burned were also considered. Participated in public hearings before the County of Kings Planning Commission.

**EIR Sections for Hazardous Waste Treatment and Storage Facilities, Aerojet-General Corporation, Sacramento County, California.** Managed preparation and provided interface with California Department of Toxic Substances Control (DTSC) and quality control for the air quality, human health, geology, soils, and hydrogeology sections of an EIR for hazardous waste treatment and storage facilities at Aerojet-General Corporation's aerospace products manufacturing facility. Authored air quality impact analysis, which included description of environmental setting, calculation of criteria pollutant and toxic air contaminant emissions, and analysis of health impacts for the project and cumulative impact analyses.

**Air Quality Assessment for Hazardous Waste Storage and Treatment, DTSC, Sacramento County, California.** Prepared air quality section of an expanded initial study and negative declaration for several small hazardous waste storage and treatment projects at Aerojet-General's aerospace products manufacturing facility in Sacramento County for the DTSC. The project and impact assessment initially included an incinerator for destruction of waste solid rocket propellant, which was subsequently deleted from the project. The air quality assessment included both direct emissions from the facilities and indirect emissions from motor vehicles.

**Air Quality Assessment for Truck Frame Manufacturing Facility, Dana Corporation, Stockton, California.** Prepared air quality section of an initial study and negative declaration for a Dana Corporation's truck frame manufacturing facility in the City of Stockton. The air quality assessment included both direct emissions from the facilities and indirect emissions from motor vehicles.

**Air Quality Assessment for Lease Renewal, Wickland Oil Company, Los Angeles, California.** Prepared air quality section of an EIR associated with lease renewal, site remediation, and modification of stored products for a Wickland Oil petroleum and motor vehicles bulk terminal at the Port of Los Angeles. The analysis included quantification of baseline and future emissions from storage tanks, marine vessel and tank truck loading, and support equipment.

## **Energy**

**Air Quality Assessment for East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects, California Public Utilities Commission and Bureau of Land Management, San Diego County, California.** Managed preparation of and contributed to the air quality and GHG analysis for San Diego Gas & Electric's East County Substation project, which includes a 500/230/138-kilovolt (kV) substation, approximately 14 miles of new 138 kV transmission line, and rebuild of the Boulevard Substation. In addition to addressing the new substation project, the EIR/EIS also addressed as "connected actions" a 200-megawatt (MW) wind energy project and a generation tie-in required for a 500/230 kV transmission line to connect a 1,200 MW wind energy project in Baja California, Mexico. Services include peer review of the Proponent's Environmental Assessment for the East County Substation project and air quality/GHG analyses for the connected actions. Prepared responses to comments regarding air quality and GHGs.

**Air Quality Assessment for Gas Storage Facility, California Public Utilities Commission, Colusa County, California.** Managed and prepared key sections of an air quality assessment for the Central Valley Gas Storage project. The gas storage project included compressors powered by natural gas-fired engines, a glycol dehydration system, and other support equipment. The assessment included an analysis of both criteria air pollutants and GHGs from project construction and operation based on a peer-review of the applicant's environmental analysis. In addition to the applicant's proposed measures, a mitigation measure was crafted to offset the project's GHG emissions.

**Air Quality Assessment for Wind Energy Project, Bureau of Land Management and County of San Bernardino, San Bernardino County, California.** Served as task leader for the air quality and GHG sections of the joint EIS/EIR for the proposed Daggett Ridge Wind Energy Project, which involves an 82.5 MW wind energy-generating facility on approximately 2,000 acres of federal and private lands in the Barstow/Daggett unincorporated area of San Bernardino County.

**Air Quality Assessment for Gas Storage Facility, California Public Utilities Commission, Sacramento, California.** Managed and prepared key sections of an air quality assessment for the Sacramento Natural Gas Storage project. The gas storage project included electric-powered

compressors, a glycol dehydration system, and other support equipment. The assessment included an analysis of both criteria air pollutants and GHGs from project construction and operation. In addition to the applicant's proposed mitigation measures, mitigation measures were proposed to reduce criteria pollutant and GHG emissions. Services include peer review of the Proponent's Environmental Assessment. Prepared responses to extensive public comments on air quality and GHG emissions.

**Air Quality Assessment for Transmission Line Replacement, California State Lands Commission, Yuba/Sutter Counties, California.** Prepared air quality section of an initial study for replacement of an electrical transmission line. The project involved replacement of 155 existing wooden poles with 125 wooden poles and 35 tubular steel poles. The assessment used the Sacramento Metropolitan AQMD's Roadway Construction Emission Model to estimate the emissions associated with construction equipment and trucks. Both criteria pollutant and GHG emissions were analyzed.

**Air Quality Assessment for Data Center, U.S. Dataport, San Jose, California.** Prepared an air quality assessment for a U.S. Dataport data center in the City of San Jose to be served by a small power plant and diesel-fired emergency generators. Assessment included estimates of proposed emissions of criteria pollutants and toxic air contaminants, a health risk assessment, and a regulatory analysis.

**Air Quality Review for Gas Pipeline, Mojave Pipeline Operating Company, Central Valley, California.** Provided review of construction emission calculations in a draft EIR/EIS prepared by the State Lands Commission and the Federal Energy Regulatory Commission for a 600-mile natural gas pipeline in central and northern California proposed by Mojave Pipeline Operating Company. Managed preparation of response to the Federal Energy Regulatory Commission's data request in support of a general conformity analysis for the pipeline project. The data request included summary of existing ambient PM<sub>10</sub> levels and attainment status in four air districts, compilation of applicable regulations for construction activities, and review of PM<sub>10</sub> emission inventories and source contributions.

### **Emission Inventories**

**GHG Emissions Inventory for Food Processing Plant, Del Monte Foods, Modesto, California.** Managed preparation of historical GHG inventory to evaluate reductions in emissions due to several energy conservation and boiler modification projects.

**Air Emissions Inventory for University Campus, Weber State University, Ogden, Utah.** Calculated annual criteria and toxic pollutant emissions for a central plant located at a university in Utah. Emissions were calculated for four boilers.

**Air Emissions Inventory for Battery Manufacturing Facility, Teledyne Battery Products, Redlands, California.** Prepared annual criteria pollutant emission submittals. Sources included lead furnaces, lead oxide storage and mixing equipment, and miscellaneous combustion devices.

**Air Emissions Inventory for Bulk Products Terminal, Wickland Oil Company, Los Angeles, California.** Prepared annual criteria pollutant emission submittals for a petroleum products bulk terminal. Sources included storage tanks, marine vessel and tank truck loading, and boilers.

**Air Emissions Inventory for Cogeneration Facility, Wheelabrator Norwalk Energy Company, Norwalk, California.** Prepared annual criteria pollutant emission submittals for a cogeneration facility. Sources included a large stationary gas turbine, steam boilers, and emergency standby engines.

**Air Toxics Emissions Inventory for Plastic Laminate Manufacturing Facility, Formica Corporation, Placer County, California.** Prepared update to an air toxics inventory plan and report for a plastic laminate manufacturing facility for Formica Corporation. Due to reductions in metal emissions from combustion of waste material, the facility was reclassified as a low-priority source and subject to minimal reporting requirements.

**Air Toxics Emissions Inventory, Various Locations, California.** Managed a team that prepared 13 air toxics emission inventory plans for a variety of industrial facilities, including cogeneration plants, electronic products manufacturing, petroleum products terminals, aircraft parts manufacturing, food processing, mining, wood products, battery manufacturing, and correctional institutions. Prepared air toxics emission inventory reports for a battery manufacturing facility, a cogeneration facility, a surgical hospital, and a petroleum products bulk terminal.

**Air Emissions Inventory for Aerospace Manufacturing Facility, Aerojet-General Corporation, Sacramento County, California.** As member of Aerojet's environmental staff, prepared or supervised preparation of annual criteria pollutant emission inventory reports for a major aerospace complex with more than 250 active air permits. The facility included coating operations, chemical manufacturing plants, sandblasting and other metal preparation operations, boilers and other support equipment, rocket test facilities, and a major groundwater remediation program.